In the Claims

1. (Previously Presented) A method for improving printer characterization to more accurately reproduce desired colors on a destination printing device given the ambient illumination at the location where the printer's output is intended to be viewed, comprising:

a) producing a target consisting of pairs of metamers, where each pair matches for one illuminant and mismatches for others;

b) viewing said target under the illumination for which characterization is desired;

c) selecting a best metameric pair match from said metameric pairs, which estimates said viewing illumination;

d) entering an indicator of said estimated viewing illumination; and

e) adjusting the characterization data to correspond to said estimated viewing illumination.

2. (Original) A method for improving printer characterization, as in claim 1, wherein the production of the target comprises:

a) choosing a base color; and

b) for each illuminant of interest,

determining a metameric match to said base color; and

placing said base color adjacent to said metameric match to form a matched pair.

3. (Original) A method for improving printer characterization, as in claim 2, wherein said metameric matched pairs are produced using different colorants.

4. (Currently Amended) A method for improving printer characterization, as in claim 2, wherein determining said metameric matched pairs comprises a re-characterization using differing grey component replacement algorithms strategies for each illuminant of interest.

5. (Original) A method for improving printer characterization, as in claim 4, further converting said base color to device values, CMYK, using said re-characterization.

6. (Previously Presented) A method for improving printer characterization, as in claim 1, wherein the targets includes either bipartite patches, concentric patches, readability tasks, or half-and-half images.

7. (Previously Presented) A method for improving printer characterization, as in claim 1, further rendering an illumination-determination target on a color reproduction device.

8. (Previously Presented) A method for improving printer characterization, as in claim 7, wherein the illumination-determination target has been prepared in advance of characterization.

9. (Previously Presented) A method for improving printer characterization, as in claim 8, wherein the illumination-determination target is shipped or otherwise provided with said destination printing device.

10. (Previously Presented) A method for improving printer characterization, as in claim 1, wherein said indicator is entered via a Digital Front End or print driver to the printer.

11. (Previously Presented) A method for improving printer characterization, as in claim 1, further comprising a Graphical User Interface for indicating said estimation of illumination.

12. (Original) A method for improving printer characterization, as in claim 1, wherein each illuminant of interest represented in said illumination-determination target is a profile.

13. (Original) A method for improving printer characterization, as in claim 12, wherein said profile is applied as a result of the indication of illumination.

14. (Previously Presented) A method for improving printer characterization, as in claim 1, wherein said estimated illumination is used to modify said characterization via a pre-transformation or post-transformation.

15. (Original) A method for improving printer characterization, as in claim 1, wherein device values for metameric matches are derived using a cellular Neugebauer model.

16. (Previously Presented) A method for improving printer characterization, as in claim 1, wherein one half of each matched metameric pairs is produced with blacK (K) only and the other half is produced with Cyan, Magenta, and Yellow (CMY).

17. (Previously Presented) A method for improving printer characterization, as in claim 16, wherein producing said metameric pairs comprises, for each illuminant of interest:

a) printing Cyan, Magenta, Yellow, and blacK (CMYK) sweeps;

b) measuring color values of said CMYK sweeps;

c) building gray-balanced Tone Reproduction Curves based on said measured color values;

d) inputting a value n into said gray-balanced Tone Reproduction Curves to determine CMY colorant values; and

e) inputting said value n into said gray-balanced Tone Reproduction Curves to determine K colorant value.